Supplementary Information


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$^1$H-NMR spectrum of compound I

$^1$H-NMR spectrum of compound II
$^1$H-NMR spectrum of compound III

$^1$H-NMR spectrum of compound IV
\[ \text{C-NMR spectrum of compound IV} \]

\[ \text{H-NMR spectrum of compound V} \]
$^{13}$C-NMR spectrum of compound V
Fig. S1 (a) UV spectra of CPCaLn micelles in 150 mM aqueous NaCl. (b) Concentration dependence of refractive index increment for CPCaLn micelles in 150 mM aqueous NaCl.
Fig. S2 Guinier plots of CPCaLₙ micelles in 150 mM aqueous NaCl.
Fig. S3 SAXS profiles of CPCaLₙ micelle in aqueous solution at different NaCl concentration. The solid line was calculated from the core-shell spherical model in Eq. 1, and the fitting parameters are same with ones shown in Figure 3a. The samples were as follows: (a) CPCaL₃; (b) CPCaL₆.
Fig. S4 The Zimm plots for CPCaL$_n$ micelles at the top of the UV peaks.
**Fig. S5** Size distribution of DOPC and DOCPe liposomes in 150mM aqueous NaCl.
Fig. S6 (a) The fluorescence intensity of the ANS spectra at 470 nm plotted against the concentration of CPCaLₙ micelles with FITC-LP in 150mM aqueous NaCl. (b) Size distribution of CPCaLₙ micelles with or without FITC-LP in 150mM aqueous NaCl.